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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/023,932

12/21/2001

Makoto Terui

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12/30/2003

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EXAMINER

LIANG, LEONARD S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,932

Applicant(s)

TERUI, MAKOTO

Examiner

Leonard S Liang

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,9,10,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 9-10, 18-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The lengthy specification have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

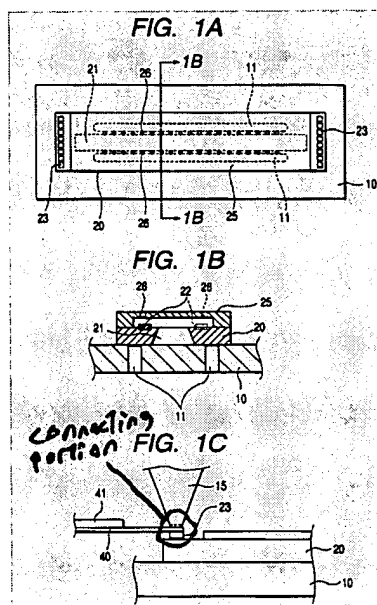
2. Claims 1-2, 9-10, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terui (US Pat 6126271) in view of Kyoshima (US Pat 4740800).

Terui discloses:

- {claim 1} A tape provided with a base (figure 1C, reference 20); a tape-like frame member having an electrical wiring, the tape-like frame member including a base provided with elements for generating energy for ejecting a liquid to be used for printing through ejection ports (figure 1A-1C, reference 20; column 5-7), the base having a first electrode (figure 1C, reference 23) for receiving electrical power supplied to the elements from a source outside the base, a conductive layer (figure 1C, reference 40) for forming the electrical wiring, and a tape member (figure 1C, reference 41) for supporting the conductive layer; a second electrode provided at the base (figure 1A, reference 23; plurality of electrodes disclosed); a first connecting portion formed of a first portion of the conductive layer, the first connecting portion not being supported by the tape member, and the first connecting portion being conductively bonded to the first electrode (figure 1C; drawn-in); a second connecting portion formed of a second

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portion of the conductive layer, the second connecting portion not being supported by the tape member (figure 1A, reference 23; same set-up as first connecting portion); wherein the second connecting portion forms reinforcement portions for reinforcing a junction between the first connecting portion and the first electrode by bonding the second connecting portion to the second electrode (figure 1A, reference 23)



- {claim 2} the reinforcement portions are arranged to face corners of the base (figure 1A, reference 23)
- {claim 9} A liquid ejection head for ejecting a liquid through ejection ports to effect printing (figure 1A-1C; abstract); a supplying passage for supplying a liquid to the ejection ports (figure 1B, reference 26); a conductive layer for forming an electrical wiring (figure 1C, reference 40); a tape member for supporting the conductive layer (figure 1C, reference 41); a base provided with elements for generating energy for ejecting a liquid to be used for printing through the ejection ports, the base having a first electrode for receiving electrical power supplied to the elements from a source outside of the base (figure 1C, reference 20, 23; column 5-7); a second electrode provided at the base (figure 1A, reference 23; plurality of electrodes disclosed); a first connecting portion

formed of a first portion of the conductive layer, the first connecting portion not being supported by the tape member, and the first connecting portion being conductively bonded to the first electrode (figure 1C; drawn-in); a second connecting portion formed of a second portion of the conductive layer, the second connecting portion not being supported by the tape member (figure 1A, reference 23; same set-up as first connecting portion); wherein the second connecting portion forms reinforcement portions for reinforcing a junction between the first connecting portion and the first electrode by bonding the second connecting portion to the second electrode (figure 1A, reference 23)

- {claim 10} the reinforcement portions are arranged to face corners of the base (figure 1A, reference 23)
- {claim 18} the first connecting portion and the second connecting portion are arranged in a direction crossing a direction of an array of the ejection ports (figure 1A, reference 23, 26)
- {claim 19} the liquid is an ink or a processing liquid for rendering the ink insoluble (column 1, lines 10-35)

Terui differs from the claimed invention in that it does not disclose:

- {claims 1 and 10} the second electrode not receiving electricity; the second connecting portion being conductively bonded to the second electrode to which electricity is not supplied when the liquid ejection print head is operated

Kyoshima discloses:

- {claims 1 and 10} dummy heaters which contain electrodes which do not receive electricity (column 3, lines 4-29)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Kyoshima into the invention of Terui. The motivation for the skilled artisan in doing so is to gain the benefit of providing uniform structure to the print head (column 3, lines 8-13).

Response to Arguments

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3. Applicant's arguments with respect to claims 1-2, 9-10, and 18-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sucoka et al (US Pat 6024439) discloses an ink-jet head having projecting portion.

Sonehara (JP04235041A) discloses an ink jet type printing head.

Nitta et al (JP 10264382A) discloses a method for connecting driving circuit of ink-jet head.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (703) 305-4754. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (703) 308-4896. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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Stephen D. Meier
Primary Examiner